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# Training America's Workforce

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# TRAINING AMERICA'S WORKFORCE

by

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# CHAPTER I

## INTRODUCTION

> Former Chief of Naval Operations Admiral James Watkins said that at the end of World War II, a U.S. cruiser had a crew of 1,700 men with an average education level of eighth grade. Today's cruisers have 700 to 800 people, and their average education is two years beyond high school (Kearns, p. 70).
>
> To compete effectively, the average American worker today must employ skills at a ninth-to-twelfth-grade level, in contrast to the typical fourth-grade standard during World War II. It's not that people are becoming less literate, it's that we keep raising the standards (Gorman, p. 56).

There have always been a large number of uneducated Americans. It was never a problem. Now, however, with increasing complexities in the work place, corporations are demanding more and more from their employees. Previously, the labor pool was constantly expanding, allowing businesses to satisfy their growing needs. Now, based on Workforce 2000, the only group that is not expanding is White males, who have been well served by the public school system (Johnston and Packer, p. xxi).

Johnson and Packer claimed in Workforce 2000 that if the United States wants to continue to prosper and stay competitive internationally, our policymakers and community leaders must find ways to:

1. Maintain the dynamism of our aging workforce. All workers must be willing to learn new ideas and concepts.

2. Reconcile the needs of women and their families versus work. Existing policies today were designed when the majority of women stayed at home.

3. Fully integrate Black, Hispanic, and immigrant workers into the workforce. Educational and training modifications are badly needed.

4. Most importantly, improve the current educational system. As industry becomes more and more complex, the standards set by our schools must be raised (Johnson and Packer, p. xiv).

Each one of these points is discussed in this paper. The workforce shortage and the public school system's problems are critiqued from three different perspectives: the educational system, the federal and state government, and the business community. The fifth chapter of this paper focuses on survey results, which include training programs that are available to manufacturing production workers.

## CHAPTER II

## AMERICA'S EDUCATIONAL SYSTEM

## CHANGES ARE NEEDED

According to the U. S. Department of Education, the United States spends over $300 billion a year on education. It claims that this is a larger share of the Gross National Product than any other industrialized nation spends (Dentzer,p. 29). What do we have to show for it?

> Some 35 per cent of the nation's 11th graders write at or below this level: I have been experience at cleaning house Ive also work at a pool be for I love keeping thing neat organized and clean. Im very social Ill get to know peopl really fast (Ehrlich, p. 129).
>
> And in a recent survey, four out of five young adults couldn't summarize the main point of a newspaper article, read a bus schedule, or figure their change from a restaurant bill. In Boston, 39% couldn't name the six New England states; in Minneapolis-St. Paul, 63% couldn't name all seven continents; in Dallas, 25% couldn't identify the country that borders the United States to the South (Kearns, p.70).

Gorman wrote that today, as many as one quarter of the American workforce, approximately twenty to twenty-seven million people, is functionally illiterate. Functional illiteracy is defined as lacking the basic reading, writing, and math skills necessary to perform in today's job market (Gorman, p. 56). Berney stated that these people have trouble performing everyday tasks, such as writing a check and filling

out a job application. America's illiteracy rate is growing by 2.3 million Americans every year. This number includes newly arrived immigrants (Berney, p. 27). Gorman said that on an average, as many as one out of every four teenagers drops out of high school every year. Of those who do graduate, one out of four has the equivalent of an eighth-grade education (Gorman, p. 56).

In a November 7, 1988 Fortune article (based on a Fortune conference of corporate leaders, educators, and politicians), Perry stated that of the 3.8 million 18-year-olds in 1988, approximately 700,000 dropped out of school and approximately 700,000 could not read their diplomas. Also, about two-thirds of the inmates in America's prisons and four-fifths of all teenage unwed mothers are dropouts. Before a health care clinic opened for DuSable High School students in Chicago, 300 pregnancies occurred in one year among the 1000 girls that attended. All of these facts suggest that illiteracy is as high as forty percent among minority students (Perry, p. 42).

Participants at the Fortune conference projected that by the year 2000, minorities will make up a majority of the school age population in ten of our states (Perry, p. 42). According to Dentzer, White high school graduates may be two to three grades ahead of their Black peers in math and science. But White graduates trail high school graduates in Japan, Canada, Britain, and Finland by as much as six years

(Dentzer, p. 29). Finally, Perry wrote that in standardized tests given in the years from 1983 to 1986, American high school seniors came in last place in biology, eleventh place in chemistry, and ninth place in physics among students from 13 countries, including Hungary and Singapore (Perry, p. 42).

All of these statistics point to the fact that our public school system is not "making the grade." There are some serious problems that need to be discussed and rectified. Even though the United States has the highest rate of college bound seniors (Governor Clinton of Arkansas claimed fifty-seven percent), it seems we cannot successfully compete internationally with other countries' high school seniors (Perry, p. 50). America's cream-of-the-crop scores just as high as other countries' most intelligent students; but the vast majority of our children need help. Whitman labeled this group of students "the forgotten half." These students include non-college attenders. Most of the forgotten half lack the basic remedial skills required to compete successfully in this world (Whitman, p. 45). The next section of this paper will describe the obstacles these students face and the changes needed to help them.

If current trends continue, by 1995 American schools are projected to be short 700,000 qualified teachers (Perry, p. 50). Furthermore, by the turn of the century, Ehrlich claimed that this number could be as high as one million teachers. This problem is mainly due to attrition and retirement. Also,

a recent study showed that only eight percent of college freshmen polled were interested in teaching (Ehrlich, p. 132). Based on statistics discussed at the Fortune conference, SAT scores of high school students who plan to become teachers are on average twenty-three to forty points lower than those students who intend to enter other professions (Perry, p. 50).

Changes need to be made, because more and more workers are entering the job market with serious deficiencies in their basic skills, and higher education is becoming increasingly important. Workforce 2000 found that between now and the year 2000, for the very first time, a majority of all new jobs will require post secondary education (Johnston and Packer, p. 98). Educators must start thinking of students as workers. In other words, educators must deal with the same issues as business executives. They need to identify what kinds of problems they have found and what reforms are needed to solve these problems. They also need to conduct a large scale needs assessment. The biggest changes are needed in the inner city public schools. Unless some major policy changes take place in our public school system, minority workers will have an even smaller fraction of the jobs in the year 2000 than they have today, and unemployment will increase. One expert's opinion is that

> Elementary school curricula should go beyond the three Rs to include foreign languages, music, geography, history, and rudimentary computer work. High schools should require every student to pass the flexible-term equivalent of four years of English, three years of math and history,

two years of the same foreign language, two years of science, and one year of computer science (Kearns, p. 73).

Kearns thought that competition is needed at the elementary and the secondary school levels, where the public school system has stifled innovation (Kearns, p. 71). National academic standards and standardized tests are essential. Also, because our academic year is forty to sixty days shorter in the United States than in Europe and Japan, American college students have fallen behind college students in Europe and Japan (Perry, p. 50).

A change that should be made is to apply performance standards to teachers, as well as to students. Realistically, this might mean more support of magnet schools in cities, and a willingness to close the worst schools, fire incompetent teachers and principals, and dispel troublesome students. This is called "Choice." Choice is one of the most talked about items on the education reform agenda today. Under Choice, children no longer are assigned to a public school, because of where they live or because of mandatory busing rules. Families get to choose. Schools get tax dollars based on the number of students who attend. Under this plan, good schools flourish, but poor schools would not. A Gallup poll showed that seventy-one percent of Americans believe that parents should have the choice of where they want to send their children to school (Perry, p. 45).

Choice has been available in Minneapolis since 1971. In 1987, Minnesota was the first state to offer parents

a choice of schools for their children. Some parents feel there are too many options; however, most parents are happy with the quality of education their children are receiving (Perry, p. 46).

Rachlin wrote that the Chicago school system was called the worst in the nation by former Education Secretary William Bennett. The Chicago school system had a dropout rate of forty-five percent. In half of Chicago's schools, the average score on college entrance exams was in the bottom one percent of the nation. Parents and the business community finally pushed for changes to be made to reform the system. The first obstacle that had to be overcome was the overstaffing at the administration's Pershing Road headquarters. One thousand jobs were abolished.

Effective the summer of 1989, the power of the Central School Board was drastically reduced and control was turned over to local school committees at each public school. Parents now hold six out of eleven seats on each committee. The remaining five seats are held by teachers, administrators, and the principal. Each school is given its own budget with spending authority, which includes the authority to hire teachers, regardless of seniority. Chicago principals no longer have lifetime tenure. Now, they can be hired for a four-year contract and terminated by these local committees.

Finally, under this new reform package, people can send their children to the school of their preference. It will be

interesting to watch and see what positive changes are produced by these reforms. This was heralded as the most sweeping package of reforms ever to introduced into a single public school system in this country. Hopefully, it will raise Chicago schools out of the bottom percentile among public schools in this nation. U. S. News & World Report described these changes in its February 6, 1989 issue (Rachlin, p. 51).

Another problem area in America is providing a good education for students who cannot or do not intend to go to college. According to a study sponsored by the William T. Grant Foundation in New York, high school graduates, ages twenty to twenty-four, earned twenty-eight percent less in real terms in 1986 than their 1973 counterparts. Also, the annual income of a college graduate in 1986 was forty-nine percent higher than that of a high school graduate. However, in 1980, the annual income of a college graduate was only twenty-five percent higher than that of a high school graduate (Perry, p. 50). Unlike Western European nations, the United States does not provide a structured job preparation system for its workers. In addition, manufacturers have ignored vocational schools for the past few years, so students tend not to go into vocational fields. Instead, responsibility for job preparation is left up to the individual, based on his/her interest, maturity, motivation, and financial assistance.

Whitman wrote that in West Germany, Austria, and Switzerland, about one-third to one-half of the non-college bound 16-to-18-year-olds are in apprenticeship programs; whereas in the United States, less than five percent of high school graduates sign up to be apprentices (Whitman, p. 48). According to Jacobs, West Germany has a three year apprenticeship program for 400 occupations, which includes standard curricula and national examinations (Jacobs, p. 48). Sweden has a vocational education system that people can take advantage of at any time during their work lives. In order not to lose those American workers who fall through the cracks, our educational system and the business community must be willing to support and enhance the vocational job preparation system.

Jacobs acknowledged that the American public is slowly but surely paying more attention to the more than 300 community colleges and technical schools in this country. Many members of the faculty in these colleges are also in industry, so they have first-hand knowledge of what is really happening in the business community. But, rather than teach American workers how to operate machines, community colleges and technical schools should help them acquire basic literacy, critical thinking, and technical skills that will be valuable in a wide variety of work settings (Jacobs, p. 68).

He claimed that community colleges' role in society has evolved over the years. At first, when high school classes

introduced students to entry level work, community colleges concentrated on more skilled technical jobs. By the 1970's, social changes were forcing community colleges to change their focus. Many new students were veterans, laid-off workers, and people who could not afford four-year colleges. These students were interested in liberal arts education, not vocational courses. With the economic problems of the 1980's, the business community turned to community colleges for setting up specific training programs. As a result, vocational schools and community colleges now can help non-college bound students and older American workers who need to brush up on their skills (Jacobs, p. 69).

However, changes are still needed at the elementary and the secondary school levels. Because our children have not been properly educated, we have many workers who lack the basic skills. President Bush should put pressure on the states to evaluate and restructure their school systems. Kearns proposed a six point plan that could be used to restructure the public school system.

First, as mentioned previously, parents should be able to select which school they want their children to attend. This option would force schools to compete with one another for the most students and the best teachers. Businesses are operated along the same lines.

Second, the administration of the public school system also should be restructured. The rest of the country should

try to do what the community and educators are doing in Chicago. Parents and teachers should have more authority in their children's schools and they should be held accountable for this authority.

Third, teachers should be treated as professionals. They should be allowed to choose (at least to some degree) their own curricula. Society should stop regarding the teaching profession as the poor stepchild of the business profession.

Fourth, we should have standardized, national tests. But first, we must make certain these tests are fair and unbiased. Every student should have the same opportunity to do well on these tests. However, once the tests are proclaimed fair, all students should be held accountable for their scores.

Fifth, our school system needs to emphasize ethical and moral values. A lot of children today need to be taught these values at school, because they are not learning them at home.

Sixth, more money and effort should be put into research and studies that would improve the public school system. Though the public school system is supported and run on the state level, the federal government should take some responsibility. But, the federal government should only have limited authority. Kearns said that school education is a $150 billion industry and the federal government only invests $100 million in it (Kearns, p. 71).

## CHAPTER III

## FEDERAL AND STATE GOVERNMENT RESEARCH AND FUNDING ARE NEEDED

The learning process for all children begins at home. Parents need to be involved with their children's studies. This involvement starts the child off on the right foot. Today, parents are away from home more than ever before. For example, Smith said that thirty years ago, sixty percent of all school children came from families where the father worked and the mother stayed at home. Now, just seven percent of all school children live in such households (Smith, p. 670). State and local governments should help American families by modifying current child care and health care laws. Recently, the U. S. Congress approved a bill requiring businesses to allow a twelve week unpaid medical leave to care for new babies or ailing family members. Unfortunately, President Bush vetoed it.

The Family Support Act of 1988 authorized the creation of the Job Opportunities and Basic Skills (JOBS) program. This program should have taken effect no later than October 1, 1990. It is aimed at providing economic self-sufficiency for welfare recipients.

> Each participant in the program will receive services aimed at meeting an individual employability plan, including educational activities such as GED or basic and remedial education, job skills training, job readiness activities, job development and placement, and support services (child care, transportation and work-related expenses). The law permits funding for the new program to reach $600 million in 1989, then rise gradually to $1.3 billion in 1995 (Ropp, p.41).

Cyert and Mowery claimed that Title III of the 1982 Job Training Partnership Act's (JTPA) main purpose is to provide a displaced worker with a new job as soon as possible. Nevertheless, Title III services have focused mainly on workers who are relatively easy to place in new jobs. According to a 1987 estimate by the United States General Accounting Office, only about seven percent of the annual number of displaced workers received JTPA assistance. Though the government is making efforts to help the unemployed, it still has a long way to go. The JTPA program needs to help unskilled workers by setting up training classes, which are customized to fulfill their needs (Cyert and Mowery, p. 59).

Several states also are trying to get more involved and help out their public school systems and/or their local businesses. States are now jumping in to help cure the deficiencies of their untrained workforces, by trying to meet the needs of their business communities. Attracting new industry is usually regarded as desirable by state and local governments. In order to bring new industry into the community, there must be good vocational training available and a willing workforce. Siler and Weiner claimed that some

states are even conducting a lot of the prescreening and pre-work testing for businesses, in order to find suitable employees for these businesses. Forty-six states offer some form of industrial training (Siler and Weiner, p. 76). Apparently, our state and local governments realize that America's public school system needs help. The school system must produce the type of worker the business community needs now and in the future. We can not continue to have a twenty-five percent dropout rate. In the following paragraphs, are some specific examples of what some states are doing to solve the underemployment of their workforces.

Siler and Weiner wrote that about eighty percent of Michigan's job training budget goes to companies that are trying to upgrade workers' skills or trying to implement new technology. Up to twenty percent of this is used for remedial training in reading and arithmetic. In 1988, Michigan spent $16.6 million to train 11,933 workers who worked at eighty-nine different companies statewide. That same year, Michigan spent $3.9 billion on standard education. Because the standard education did not quite do the job, the state had to invest in additional remedial skills training.

Siler and Weiner found that Illinois has committed $40 million over the next five years to train workers at Diamond Star Motors. Diamond Star Motors is a joint venture that produces the Plymouth Laser and the Mitsubishi Eclipse in Normal, Illinois. Diamond Star is matching the state, dollar

for dollar, for this training program. Given this type of incentive from the state, more companies might start investing in their most important asset, their employees (Siler and Weiner, p. 76).

Finally, Perry wrote that besides getting involved in the business community, some states also are helping the public school system. In 1984, South Carolina enacted a one cent sales tax increase to pay for its Education Improvement Act. The governor, the business community, parents, and educators were involved in this decision. Through the efforts of all of these groups, a division of public accountability was created to monitor progress and to make sure everyone was involved and informed. Since this act was passed, the average combined math and verbal SAT scores in South Carolina have risen to 838, up thirty-five points. This is the largest increase recorded in the nation (Perry, p. 44).

## CHAPTER IV

## AMERICA'S BUSINESS COMMUNITY

## TRAINING IS NECESSARY

"Research has found that the most successful workers are those who can process and organize information, monitor their own understanding, and who can explain the purpose of the reading and writing for the accomplishment of a task" (The Bottom Line: Basic Skills in the Workplace, p. 6). This chapter looks at how industry is dealing with workforce deficiencies now and how it will have to deal with this problem in the future. The following is a series of notable quotes. Ford chairman Donald E. Peterson stated, "The prosperity of our business will depend on our ability to operate more and more like a learning enterprise" (Gorman, p. 57). Companies that choose to adopt this philosophy feel they do not have any choice. They feel that they can not wait for America's ailing school system to become fully operational. For example, "Surveys made during the early 1980's suggested that as many as 30 per cent of the workers who lost their jobs in the automobile and steel industries were hampered in their search for new jobs by deficiencies in basic skills" (Cyert and Mowery, p. 57).

Future technologies must be rapidly and effectively adopted. Such changes will require more commitment by public and private institutions in educating the United States workforce. As stated previously, some companies have already picked up the gauntlet and accepted the fact that if they are going to be successful, education will have to take place in the work environment. "National policies that promote such corporate and individual attitudes toward retraining should be backed up with changes in the tax code to encourage lifelong education" (Johnston and Packer, p. XXV).

Along with deficiencies in the basic skills of the American workforce, many demographic changes also will be taking place in the next ten years. Five demographic changes were reported by Johnston and Packer and incorporated into Workforce 2000.

First of all, both America's population and its workforce will grow more slowly than at any time since the 1930's. For example, in the 1950's, the national population increase was at 1.9 percent. In the year 2000, the population increase will decline to .7 percent. Similarly, in the 1970's, the workforce rate increased at 2.9 percent, but by the year 2000, the workforce will only be increasing at a rate of one percent.

In the past, and even now to some extent, corporations have laid-off people when work was slow and rehired them when work picked up. In the future, companies will find this

tactic much more difficult to do because the "good employees" will move on to other jobs or retire. Companies will have to be much more careful with their human assets, especially the hardworking, respected employees.

Second, the average age of the United States population will rise, and the pool of young workers entering the labor market will shrink. In 1987, the average age was thirty-six. In the year 2000, the average age will be thirty-nine. In the year 2000, the 16-to-24-year-old age group will decrease by eight percent. This means that the American workforce will be more experienced and stable. But, older workers are less likely to want to be transferred, change occupations, or undertake on-the-job training for new procedures and technologies. Companies should make on-going training a prerequisite for all employees, especially the veterans who have not been to school in a while. Learning should be a lifelong experience.

Even though industry leaders are aware of the aging of our workforce, their policies do not yet reflect this trend. For example,

> A recent national survey showed that while 75 per cent of the 600 human resource managers polled believed that career counseling and training of senior employees was needed, fewer than 30 per cent had these programs in place (Patterson, p. 49).

Patterson also said that older workers tend to need training that is self-paced, that mostly consists of independent study and some support. Classroom training tends to work better

with younger workers. In addition, companies accustomed to hiring young workers at cheap rates may find they have to raise wages, hire people with fewer skills, or invest in labor saving technology.

A third demographic change involves the ratio of men and women entering the workforce. Women will make up about two-thirds of the new entrants into the workforce between now and the year 2000. Along with the influx of more women, come the increased interest in job sharing, part-time jobs, and stay-at-home jobs. Right now less than five percent of the firms in the United States provide on-site day care facilities. Corporation's attitudes should accommodate the interests of their women employees. Management will have to realize that it is better to keep a valued employee part-time, than lose her altogether.

Fourth, minorities will make up a larger share of the new entrants into the labor force. Nonwhites will make up twenty-nine percent of all new entrants between now and the year 2000. This is twice the rate of the current minority entrants. By the year 2000, corporate America will be able to draw only fifteen percent of its new entrant requirements from White males with high school diplomas. Currently, this group comprises one-half of America's workforce. Now is the time to emphasize education, training, and employment assistance for minorities. For this change to take place, both individuals' and the business community's attitudes will have to change.

Fifth and lastly, immigrants will represent the largest share of the increase in the population and the workforce for the first time since World War I. With this large increase of immigrants into the workforce, employers will have to become more flexible with language requirements. They will have to be willing to teach these new workers the English language or set up the work place to accommodate different languages (Johnston and Packer, p. 75). Table 1 depicts the demographic make-up of the current workforce and the demographic make-up of new entrants expected to enter the workforce between 1985 to 2000.

| | Labor Force 1985 | Net New Workers 1985-2000 |
|---|---|---|
| Total | 115,461,000 | 25,000,000 |
| Native White Men | 47% | 15% |
| Native White Women | 36% | 42% |
| Native Nonwhite Men | 5% | 7% |
| Native Nonwhite Women | 5% | 13% |
| Immigrant Men | 4% | 13% |
| Immigrant Women | 3% | 9% |

(Source: Workforce 2000, p. xxi)

Table 1

Based on Workforce 2000, here are some other key trends that will probably occur. Manufacturing will have a smaller

share of the United States economy in the year 2000 than it has today. The service industry will create ninety percent of the new jobs between now and 1995, and manufacturing will account for only eight percent of the new jobs. New jobs in the service industry will demand much higher skill levels than they do today. Because of this change, unemployment will increase among the unskilled workers (Johnston and Packer, p. xvii).

> According to a survey of 14 industries conducted by the Bureau of labor statistics, demand for blue collar labor is declining in 93 per cent of the cases studied, and demand is rising for 86 per cent of the jobs requiring professional, technical, or managerial skill" (Smith, P. 669).

Jobs in the middle of the skills distribution today will represent the least skilled occupations in the future. Berney claimed that automation is redefining all jobs, including those associated with physical labor. For example, in the insurance industry, tasks that once required five people now require only one person and a computer (Berney, p. 28). In fact, as mentioned before,

> The fastest-growing jobs will be in professional, technical, and sales fields requiring the highest education and skills levels. Of the fastest-growing job categories, all but one, service occupations, require more than the median level of education for all jobs. Of those growing more slowly than average, not one requires more than the median education" (Johnston & Packer, p. XXI).

Forty percent of the jobs in the United States fall into the two lowest skills categories, but by the year 2000, only twenty-seven percent of the jobs will fall into these categories. Now, only twenty-four percent of the jobs in the

United States fall into the three highest skills categories, but by the year 2000, a whooping forty-one percent of the jobs will fall into these categories. These fast growing, highly skilled jobs require more language, math, and reasoning skills than today's jobs (Johnston and Packer, p. 99). Table 2 displays the figures that back up this point.

| | Current Jobs | Fast Growing | Slowly Growing | Declining |
|---|---|---|---|---|
| Language Rating | 3.1 | 3.8 | 2.7 | 1.9 |
| Math Rating | 2.6 | 3.1 | 2.3 | 1.6 |
| Reading Rating | 3.5 | 4.2 | 3.2 | 2.6 |

(Source: Workforce 2000, p. 99)

Table 2

Along with the demand for higher skills, the new jobs will require more outside education on the part of the individual. Table 3 displays the education that is required for current jobs versus new jobs.

| | Current Jobs | New Jobs |
|---|---|---|
| 8 years or less | 6% | 4% |
| 1-3 years of high school | 12% | 10% |
| 4 years of high school | 40% | 35% |
| 1-3 years of college | 20% | 22% |
| 4 years of college or more | 22% | 30% |
| Total | 100% | 100% |
| median years of school | 12.8 | 13.5 |

(Source: Workforce 2000, p. 98)

Table 3

With all this streamlining of institutions and technology, productivity and wages should increase. But jobs will be even more scarce for unskilled workers. Today's workers are suffering from "skills inflation." Garrison Moore of the National Alliance of Business (NAB) defined skills inflation as an increase in the number and the variety of duties workers must perform.

Kearns wrote that if current demographic and economic trends continue, American businesses will have to hire a million new workers a year who cannot read, write, or count (Kearns, p. 70). We must make a commitment to raise our educational standards. Otherwise, millions of Americans are going to fall through the cracks. For example, Perry reported that eighty-four percent of the 23,000 people who took exams for entry level jobs at New York Telephone in 1988 failed

(Perry, p. 42). Also, Motorola, Inc. Vice President Carlton Braun stated that only twenty percent of job applicants can pass a seventh-grade English comprehension test or a fifth-grade mathematics test (Berney, p. 27). New jobs are going to become even more technical. Table 4 displays a wide variety of occupations and their rates of growth.

| Occupations | Current (000s) | New Jobs (000s) | Rate of Growth |
|---|---|---|---|
| Total | 105,008 | 25,952 | 25% |
| Service Occupations | 16,059 | 5,957 | 37% |
| Managerial and Management-Related | 10,893 | 4,280 | 39% |
| Marketing and Sales | 10,656 | 4,150 | 39% |
| Administrative Support | 18,483 | 3,620 | 20% |
| Technicians | 3,146 | 1,389 | 44% |
| Health Diagnosing and Treating Occupations | 2,478 | 1,384 | 53% |
| Teachers, Librarians, and Counselors | 4,437 | 1,381 | 31% |
| Mechanics, Installers, and Repairers | 4,264 | 966 | 23% |
| Transportation and Heavy Equipment Officers | 4,604 | 752 | 16% |
| Engineers, Architects, and Surveyors | 1,447 | 600 | 41% |
| Construction Trades | 3,127 | 595 | 19% |
| Natural, Computer, and Mathematic Scientists | 647 | 442 | 68% |
| Writers, Artists, Entertainers, and Athletes | 1,092 | 425 | 39% |

| Occupations | Current (000s) | New Jobs (000s) | Rate of Growth |
|---|---|---|---|
| Other Professionals and Paraprofessionals | 825 | 355 | 43% |
| Lawyers and Judges | 457 | 326 | 71% |
| Social, Recreational, and Religious Workers | 759 | 235 | 31% |
| Helpers and Laborers | 4,168 | 205 | 5% |
| Social Scientists | 173 | 70 | 40% |
| Precision Production Workers | 2,790 | 61 | 2% |
| Plant and System Workers | 275 | 36 | 13% |
| Blue Collar Supervisors | 1,442 | -6 | 0% |
| Miners | 175 | -28 | -16% |
| Hand Workers, Assemblers, and Fabricators | 2,604 | -179 | -7% |
| Machine Setters, Operators, and Tenders | 5,527 | -448 | -8% |
| Agriculture, Forestry, and Fisheries | 4,480 | -538 | -12% |

(Source: Workforce 2000, p. 97)

Table 4

Table 4 illustrates that jobs are being created in the service industry, but the rate of growth for jobs in manufacturing is, for the most part, a low or negative increase. Businesses must train their workers to prepare them for the future.

Many different estimates indicate how much industry spends on training. The Department of Labor estimates that

American corporations spend $30 billion a year on employee training. The American Society of Training and Development (ASTD) estimates that American corporations spend more than $40 billion a year. But, the ASTD found that only $300 million of this $40 billion is being spent on basic skills training. Other estimates include $25 billion, $44.4 billion, and $210 billion. It does not really matter which of these figures is correct. What is important is the business community is spending a lot of money on employee training.

Who is receiving this training and why has the business community decided to spend billions of dollars? "Overall, the skills gap cost the business community an estimated $25 billion to $30 billion annually in low productivity, workplace accidents, absenteeism, poor product quality and lost managerial and supervisory time" (Berney, p. 27). Some corporations feel that training their employees is doing the school system's product-recall work. Is it? But how else is the $30 to $40 billion being spent?

The Department of Labor estimates that the majority of United States employee training dollars are being spent on improving the skills of people in supervisory and executive positions. Companies are three to four times more likely to offer workshops in stress management or how to run meetings, than to train workers seeking to improve their positions in the company. This trend might be due to the fact that there has always been a surplus of job applicants. However, as

stated previously, it has been predicted that businesses will be forced to hire one million illiterate workers in the years to come. Therefore, companies need to make sure that all employees are constantly reinvesting in themselves.

Smith said that we are internationally competitive because of the top ten percent of our workforce. Nevertheless, we are in an increasingly weak position because of the remaining ninety percent (Smith, p. 669). Approximately half of the Fortune 500 companies have resorted to employee training and education. Most of these companies even train during work hours. But what about the other companies? Do they feel that their employees are experts in all the facets of their jobs? The next chapter of this paper presents the results of a training survey sent to Chicago area manufacturing companies.

Of the companies that do offer employee training and education, the larger companies tend to rely on in-house training, and the smaller companies tend to rely on community colleges and volunteer tutors. Businesses with fewer than one hundred employees are responsible for roughly half of the recently created jobs. Yet, only about twenty percent of these businesses conduct job-related training. The Small Business Administration has stated that most of this training is financed by the employees themselves. Jacobs claimed that there are roughly 115,000 small and medium-sized firms (20 to 499 employees). These companies usually cannot afford to

train their employees. The unfortunate part of this story is that these companies tend to be the suppliers and the subcontractors on which large companies depend. American companies should follow Japanese companies' lead. These companies train, not only their own employees, but their suppliers' employees too (Jacobs, p. 67). Finally, a 1983 national survey conducted by the ASTD found that sixty percent of the institutions polled in the United States had a tuition reimbursement program. Companies also need to help out employees who want earn their high school diplomas.

A corporation's employee training and education program is effective if its top management believes in and supports employee education. If management believes the key to its company's success is to improve the skills of its workers through training, then employee education will work. Here are some examples of companies taking the initiative to improve and enrich their employees' work lives.

Smith said that the Motorola plant at Schaumburg, Illinois is now conducting classes in remedial English and algebra. The average worker will eventually take about a half dozen classes, which will cost Motorola $1350 per person. The employees who need work in English continue in the literacy classes for three to four years. This program can cost the company over $25,000 per worker. At a presentation given in the spring of 1989 to a Philosophy of Education class at Loyola, Motorola's director in charge of training for

manufacturing stated that Motorola's ultimate goal is to bring all employees to a seventh grade reading level and a fifth grade math level.

Smith also said that at Motorola's Boynton Beach, Florida plant, workers are taking four months of classes, for five hours a day to learn how to operate computer-controlled robots. To pay for this training program, Motorola budgets approximately $45 million a year for training. This amount is about three percent of its payroll. Three percent is the figure the ASTD recommends that a corporation should spend on training a year (Smith, p. 669).

Polaroid is another corporation that has set up an excellent training program for its employees. The Bottom Line analyzed Polaroid's program and found that Polaroid has a successful basic skills training package. Employee participation is voluntary. Supervisors can recommend that their employees sign up, but it is ultimately the employees' choice. First, the employee is given an assessment to determine his/her precise needs. If the employee is reading below the fourth grade level, he/she is tutored four hours a week. Two hours is on his/her time and two hours is on company time. All instruction is closely related to the employee's job. Along with this training program, Polaroid offers a literacy support group with an in-house counselor. This group gets together twice a month at a company sponsored breakfast (p. 21).

According to Gorman, American Express spends about $10 million annually to teach its new workers basic English and social skills. American Express feels that the money is well spent, because profits depend on good customer relations.

She also wrote that Domino's Pizza now spends $50,000 on a reading program that helps new bakers understand their dough-making manuals. Training experts are beginning to realize that, for adults, it is very important that the training be done in a context they see as relevant. In one study, it was discovered that soldiers could improve their reading skills by two grade levels in just six weeks, if the material was relevant to their jobs. The material must be something people can relate to and understand (Gorman, p. 57).

Jacobs stated that the Japanese automotive industry has successfully implemented Statistical Process Control (SPC). This is a method of inspecting production goods through simple statistical sampling techniques. When the big three auto makers in Michigan saw this they wanted their suppliers to develop extensive training programs in SPC. In 1984, the Governors Office of Job Training helped this effort by giving a $500,000 grant to train faculties at community colleges in how to teach a standard SPC course. Through the efforts of the government, the community colleges, and the big three auto makers, the automobile parts suppliers could be properly trained in the technique of SPC (Jacobs, p. 71).

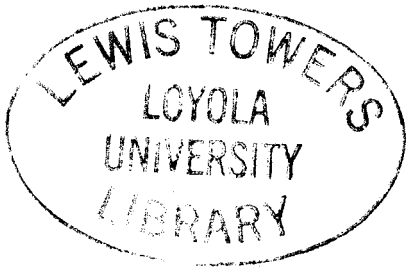
Ropp claimed that In recent years, programs for retraining and upgrading are appearing more frequently as part of union contract negotiations. Companies set up the training programs and the unions give something back. For instance, past wage increases have been traded for training programs. An example of this type of collective bargaining agreement exists among the UAW (United Auto Workers) and Ford, General Motors, and Chrysler Companies. The program that sprung from this agreement was designed to assist industrial union members, regardless of whether they are current or displaced employees. The training program will teach them new skills, which, in turn, will help them find jobs in other industries, if necessary. This program also can help them retain their current jobs by providing expertise in new technologies (Ropp, p. 40).

Some smaller unions have obtained job retraining programs by working together to form a stronger unit. Eight unions formed the Consortium for Worker Literacy in New York City. They requested and received $3.5 million, over a two year period, from the New York State Department of Education, the Municipal Assistance Corporation, and the New York City Board of Education. When they began operations in 1985, 450,000 people, including union members, spouses, and their children were eligible for instruction in literacy skills (Ropp, p. 45). In this example, the government stepped into the situation and helped out by giving money.

Businesses also can help educate their future employees by supporting outstanding schools and teachers. It is important to support imaginative individuals.

> The Exxon Education Foundation, for instance, recently approved a $600,000 grant to the Coalition of Essential Schools, a group of 56 high schools around the U.S. that Sizer organized (Chairman of Brown University's Dept of Education) to experiment with new approaches to teaching. Classes in a coalition school contain an average of 20 students and may last as long as two hours. Teachers act as coaches rather than as conduits of information (Perry, p. 44).

A variety of methods should be used to help educate America's present and future workforce. The government can get involved by doing research and issuing grants. Educators can look for ways to streamline and improve the public school system. The business community can continually train and educate its workforce. The community can get involved by insisting that parents take an interest in their children's studies and by pushing for educational reforms and improvements. Different groups have different tasks in the struggle to improve the skills of the American workforce.



## CHAPTER V

## TRAINING AMERICA'S PRODUCTION WORKERS

## SURVEY RESULTS

The training programs that are offered to production workers in manufacturing companies are only one facet of the training of America's workforce. Since the business community seems to be "taking the brunt" of America's illiteracy and skills deficiency problem, however, this study focuses on what Chicago area manufacturing companies are doing to upgrade their employees' skills.

The survey was sent out to one hundred Chicago area manufacturing companies. The companies' addresses are published in the Illinois Manufacturers Directory. These companies were selected randomly from the Chicago metropolitan area. The companies that were surveyed manufacture a wide variety of products: cars, cosmetics, foods, construction, etc. The Directory lists the number of employees in each company. Only companies with 300 or more employees were selected, based on the assumption that a company with fewer than 300 employees might tend to de-emphasize remedial skills training programs.

The surveys were distributed to one hundred companies in the Chicago area, and fifty-six companies responded to the

surveys. One of the companies had its Boston manufacturing plant complete and return the survey. Three other companies that do not have manufacturing facilities in the Chicago area returned the surveys, but did not complete them. One response could not be used because both the name of the company and the number of employees were missing from the completed survey. Two of the responses contained job rejection letters in lieu of completed surveys! Thus, only fifty of the fifty-six responses could be used in this survey.

The surveys, cover letters, and stamped, self-addressed envelopes were mailed out on a Tuesday, and by Thursday completed surveys began arriving. Each survey was sent to the attention of the company's Human Resource Department. The cover letter explained the purpose of the survey and stated that if they were interested they should include their names and addresses, and they would be sent a copy of the survey results. The letter and the survey that were sent out are in Appendix A.

The survey was designed to be as "user friendly" as possible. Most questions required only one response, but some of the surveys that were returned had more than one response or no response at all. Discrepancies such as these have been taken into consideration by adding comments to the results. This survey is basically a tool to find out what types of training are provided for production workers in manufacturing companies. I am particularly interested in manufacturing

companies, because I am currently employed in a division of a nationally known manufacturing corporation. The survey that was sent to my company was not returned.

The first survey questions ask how much education and work experience is required of applicants who apply for jobs as production workers. The remaining survey questions focus on four types of training that could be provided for production workers. These types of training include pre-employment testing, new employee training, on-going job-related training, and remedial skills training. The survey also asked how the on-the-job training and remedial skills training is conducted.

Survey items nine and twelve contained questions such as the following. How big are the classes? What is the course length? What types of trainers are involved? Where are the classes taught? And how are the classes taught? Most of the discrepancies found in the responses were elicited by Questions nine and twelve. Thus, the results of these questions are not "cut and dried" or "black and white." Question thirteen was the only open-ended question included in the survey. The responses to question thirteen included many non-descriptive answers. Many of the participants did not answer the question.

The fifty companies that responded were segregated into four groups, based on company size. The survey groups were broken down as follows: 100-499 employees, 500-999 employees,

1000-2499 employees, and 2500-10,000 employees. Some of the companies that responded have less than the study's 300 employee minimum. The fifty responses fell into the four survey groups as follows:

100 - 499 employees - 14 responses
500 - 999 employees - 16 responses
1000 - 2,499 employees - 13 responses
2500 - 10,000 employees - 7 responses.

Survey question one: what is the minimum level of education needed to be hired as a production worker at your company?

| | Company Size | | | | |
|---|---|---|---|---|---|
| Education | 100-499 | 500-999 | 1000-2499 | 2500-10,000 | Total |
| No H.S. degree | 72% | 69% | 62% | 43% | 64% |
| GED | 7% | 31% | 23% | 14% | 20% |
| H.S. degree | 21% | 0% | 15% | 43% | 16% |
| Some College | 0% | 0% | 0% | 0% | 0% |

Table 5

These results indicate that the overwhelming majority of companies, regardless of company size, require very little education of their production workers. But with the ever threat of increasingly complex technology on the horizon, companies will be forced to change their orientation. And even though sixty-four percent of the workers do not need a

high school degree or its equivalent, thirty-six percent of the respondents require a diploma or a GED (high school equivalency). Furthermore, as company size increases, so does the requirement for at least a high school degree or its equivalent.

Survey question two: how much work experience is required to be hired as a production worker at your company?

| | Company Size | | | | |
|---|---|---|---|---|---|
| Work Experience | 100-499 | 500-999 | 1000-2499 | 2500-10,000 | Total |
| No Experience | 64% | 63% | 50% | 43% | 57% |
| 1-2 Years | 22% | 25% | 36% | 57% | 31% |
| 3-4 Years | 0% | 6% | 0% | 0% | 2% |
| 5 or more years | 0% | 6% | 0% | 0% | 2% |
| Other | 14% | 0% | 14% | 0% | 8% |

Table 6

The overwhelming majority of the companies that responded to the survey stated that production workers need little or no work experience. But, as the company size increases, so does the requirement for at least some previous work experience. The companies that fell into the "other" category responded that the number of years experience needed depends on the position available. Obviously, some jobs require more expertise than others. A typical production floor might have the following production line training. At

one end of the scale are the solder workers and small task assemblers. New employees in these areas, are sent to school for the couple of weeks to learn how to perform their job duties. At the other end of the scale, are the test technicians. These employees must be experienced and dependable when they are hired.

Will the company of the future require more than two years experience for new production worker applicants? At this time, only four percent of the respondents expect more than two years experience of their job applicants. The remaining manufacturers hire workers with little or no experience. Future technologies might force manufacturers to change their standards and their attitudes.

Survey question three: are production workers' skills tested before they are hired?

| | Company Size | | | | |
|---|---|---|---|---|---|
| | 100-499 | 500-999 | 1000-2499 | 2500-10,000 | Total |
| Yes | 31% | 50% | 62% | 43% | 47% |
| No | 69% | 50% | 38% | 57% | 53% |

Table 7

On the whole, the companies polled are pretty much split down the middle on the issue of whether or not to test the skills of job applicants. Furthermore, as the results have shown, sixty-four percent of all companies require no high

school education and fifty-seven percent of all companies will hire an applicant with no experience. Such results suggest the hypothesis that half of all manufacturing companies hire a job applicant solely on the basis of the interview itself.

Survey question four: if the company does test its workers' skills before they are hired, which skills are tested? Not all the companies that circled "yes" on question three answered this question. The companies that did respond circled various combinations of the skills given. For instance, of the companies with 100-499 employees, some test the job applicants' English language skills. One company tests for basic math skills. Another company tests welding skills (job-related skills). One company uses the General Aptitude Test Battery (GATB).

Of the companies with 500-999 employees, all but one who answered this question test for job-related skills. Several companies also test for the basic remedial skills listed. Some of the "other" skills that were listed include mechanical skills, dexterity skills, sight, and intelligence.

Of the companies with 1000-2499 employees, many who answered this question test for both job-related skills and basic remedial skills. Some "other" skills that are tested include trade and craft skills, welding skills, manual dexterity, vision, and the GATB.

Finally, of the companies with 2500-10,000 employees, the few that answered "yes" test for job-related skills. One

company also tests for some of the basic skills. This company also tests for mastery of chemistry concepts.

Survey question five: once hired, are new production workers required to pass a job-related training course?

| | Company Size | | | | |
|---|---|---|---|---|---|
| | 100-499 | 500-999 | 1000-2499 | 2500-10,000 | Total |
| Yes | 43% | 25% | 38% | 57% | 38% |
| No | 57% | 75% | 62% | 43% | 62% |

Table 8

In this case, the majority of the companies that responded do not require new employees to pass a job-related training course. The company I work for requires its new production workers to pass a two week training course before they can begin work on the production floor. If they do not pass the course, they are fired. More companies might have to go this route when technology becomes more complex. Should companies expect their employees to be knowledgeable in all technologies? If they have these expectations, then job applicants will need more training and/or experience in order to get jobs. Yet, today, more than half of the companies polled do not require specific skills or work experience for production workers.

Survey question six: if the company does have a new employee job-related training course, what is the course length?

| | Company Size | | | | |
|---|---|---|---|---|---|
| Course Length | 100-499 | 500-999 | 1000-2499 | 2500-10,000 | Total |
| 1-3 days | 0% | 25% | 0% | 25% | 10.5% |
| 4-6 days | 17% | 0% | 20% | 0% | 10.5% |
| 1 Week | 0% | 0% | 0% | 25% | 5% |
| 2 weeks | 17% | 25% | 0% | 25% | 16% |
| 3 or more weeks | 33% | 50% | 60% | 0% | 37% |
| Other | 33% | 0% | 20% | 25% | 21% |

Table 9

The responses to this question vary widely. The category with the largest percentage is "three or more weeks." The responses in the "other" category include sixty days, it varies, it depends on the area, and it depends on the job and ability. These companies determine the course length based on the difficulty of the job.

Survey question seven: does your company provide on-going job-related training?

| | Company Size | | | | |
|---|---|---|---|---|---|
| | 100-499 | 500-999 | 1000-2499 | 2500-10,000 | Total |
| Yes | 100% | 87.5% | 92% | 100% | 94% |
| No | 0% | 12.5% | 8% | 0% | 6% |

Table 10

It is safe to say, that nearly all of the companies that responded offer some type of on-going job-related training. This is one positive sign that manufacturing companies support on-the-job training for their employees. These companies must feel that it is important to keep employees up-to-date on the most current procedures and technologies that they will be required to know.

Survey question eight: how often does this on-going job-related training occur?

| | Company Size | | | | |
|---|---|---|---|---|---|
| Course Occurrence | 100-499 | 500-999 | 1000-2499 | 2500-10,000 | Total |
| Monthly | 0% | 0% | 8% | 0% | 2% |
| Semi-annually | 7% | 0% | 0% | 0% | 2% |
| Annually | 0% | 0% | 25% | 0% | 6.5% |
| As needed | 86% | 86% | 67% | 100% | 83% |
| Other | 7% | 14% | 0% | 0% | 6.5% |

Table 11

Again, an overwhelming majority of companies polled offer job training. Eighty-three percent of the companies conduct on-going job-related training on an "as needed" basis. This is a logical way of introducing new procedures and technologies. Who decides that the training is now needed? Is it upper management, production floor supervisors, or the employees themselves? One last note, some of the answers in the "other" category include apprenticeship programs, when fulfilling a new type of position, and it varies.

Survey question nine: how are your on-going job-related training courses taught? The respondents were encouraged to circle more than one answer, and most did. Tables 12, 13, 14, 15, and 16 display the results.

| | Company Size | | | | |
|---|---|---|---|---|---|
| Class Size | 100-499 | 500-999 | 1000-2499 | 2500-10,000 | Total |
| Individualized instruction | 64% | 39% | 18% | 14.3% | 36% |
| 2-5 student | 0% | 15% | 9% | 0% | 7% |
| 6-10 students | 0% | 0% | 9% | 14.3% | 5% |
| 11-20 students | 0% | 23% | 27% | 14.3% | 6% |
| 21 or more students | 0% | 15% | 0% | 0% | 5% |
| Varies | 36% | 8% | 37% | 57% | 31% |

Table 12

The percentages indicate that the majority of the companies either provide individualized instruction or they

vary class sizes, depending on the circumstances. Only a couple of the companies conduct training with a class size of twenty-one or more students. Furthermore, the results suggest that most companies with less than 1000 employees offer individualized on-going job-related training.

Survey question nine: how are your on-going job-related training courses taught?

| | Company Size | | | | |
|---|---|---|---|---|---|
| Length of Training | 100-499 | 500-999 | 1000-2499 | 2500-10,000 | Total |
| 1-5 hours | 22% | 46% | 27% | 14.3% | 29% |
| 6-10 hours | 11% | 9% | 27% | 14.3% | 16% |
| 11-20 hours | 11% | 18% | 0% | 0% | 8% |
| 21-30 hours | 0% | 0% | 9% | 0% | 3% |
| 31 or more hours | 0% | 9% | 0% | 14.3% | 5% |
| Varies | 56% | 18% | 37% | 57% | 39% |

Table 13

The results shown in Table 13 are difficult to analyze. Almost one-third of the respondents claim that the length of training is one to five hours. On the other hand, thirty-nine percent of the respondents claim the length of training varies, depending on the curricula.

Survey question nine: how are your on-going job-related training courses taught?

| | Company Size | | | | |
|---|---|---|---|---|---|
| Type of Trainer | 100-499 | 500-999 | 1000-2499 | 2500-10,000 | Total |
| Immediate supervisor | 43% | 44% | 27% | 14.3% | 35% |
| In-house expert | 7% | 12.5% | 18% | 14.3% | 13% |
| HR trainer | 7% | 12.5% | 0% | 0% | 6% |
| Outside consultant | 0% | 6% | 0% | 0% | 2% |
| Other | 7% | 6% | 0% | 14.3% | 6% |
| Varies | 36% | 19% | 55% | 57% | 38% |

Table 14

Table 14's percentage breakdown is quite similar to Table 13's breakdown. It is interesting to note that training is provided by the immediate supervisor in one-third of the responses. By contrast, thirty-eight percent of the respondents stated that the type of trainer varies, depending on the curricula. Trainers indicated in the "other" category include a coworker and a technical trainer.

Survey question nine: how are your on-going job-related training courses taught?

| | Company Size | | | | |
|---|---|---|---|---|---|
| Training Location | 100-499 | 500-999 | 1000-2499 | 2500-10,000 | Total |
| Prod. environment | 57% | 40% | 27% | 14% | 38% |
| In-house classroom | 0% | 27% | 9% | 0% | 11% |
| Off-site facility | 0% | 6% | 0% | 0% | 2% |
| Other | 0% | 0% | 0% | 0% | 0% |
| Varies | 43% | 27% | 64% | 86% | 49% |

Table 15

Again, Table 15's percentage breakdown is similar to the previous two tables' breakdown. Thirty-eight percent of the respondents' companies use the production environment for their on-going job-related training location. Forty-nine percent said that the training location varies, depending on the curricula. Finally, seventy percent of the "varies" responses use a combination of the production environment and an in-house classroom. The "other" category was not selected.

Survey question nine: how are your on-going job-related training courses taught?

| | Company Size | | | | |
|---|---|---|---|---|---|
| Training Program | 100-499 | 500-999 | 1000-2499 | 2500-10,000 | Total |
| On-the-job training | 62% | 57% | 36% | 14% | 47% |
| Specific courses | 0% | 7% | 0% | 0% | 2% |
| Self-testing | 0% | 0% | 0% | 0% | 0% |
| Computer-assisted instruction | 0% | 0% | 0% | 0% | 0% |
| Other | 0% | 0% | 0% | 0% | 0% |
| Varies | 38% | 36% | 64% | 86% | 51% |

Table 16

The results in Table 16 show a even split down the middle on this issue. Almost half of the respondents answered that their training programs include on-the-job training. A little over half claim that the training program varies, depending on the curricula. Also, every conceivable combination of choices is included in the "varies" category. The "other" category was not selected.

Survey question ten: does your company provide training courses in basic remedial skills?

| | Company Size | | | | |
|---|---|---|---|---|---|
| | 100-499 | 500-999 | 1000-2499 | 2500-10,000 | Total |
| Yes | 21% | 12.5% | 54% | 29% | 28% |
| No | 79% | 87.5% | 46% | 71% | 72% |

Table 17

As the results indicate, an overwhelming majority of the companies that responded do not offer any type of training in basic remedial skills for their production workers. Only the companies with an employee population of 1000-2499 had a higher response rate of "yes" (fifty-four percent) than "no" (forty-six percent). In this survey, most of the companies feel it is not their place to have to develop their production workers' basic skills. Will corporate attitudes and opinions be forced to change in the future, due to the fact that our workforce might not have the basic skills to handle technological changes?

Survey question eleven: if your company does provide training courses in basic remedial skills, what skills are taught? If possible, please indicate the grade equivalence. Of the companies that responded "yes" (twenty-eight percent), fifty-seven percent stated that they offer training courses in the English language, reading, writing, and basic math. The other forty-three percent offer training courses in some

combination of the four listed above. The responses received for grade equivalence include the sixth, eighth, tenth, and twelfth grade.

Survey question twelve: how are your remedial training courses taught? As was already discovered in question ten, not many of the companies responded "yes" when asked if they offer remedial skills training. The next five tables (tables 18, 19, 20, 21, and 22) are based on a small participant response (twenty-eight percent), therefore few conclusions can be drawn from these responses.

Company Size

| Class Size | 100-499 | 500-999 | 1000-2499 | 2500-10,000 | Total |
|---|---|---|---|---|---|
| Individualized training | 0% | 0% | 12.5% | 0% | 7% |
| 2-5 students | 0% | 0% | 25% | 0% | 13% |
| 6-10 students | 0% | 0% | 0% | 0% | 0% |
| 11-20 students | 66.7% | 0% | 12.5% | 0% | 20% |
| 21 or more students | 0% | 0% | 0% | 0% | 0% |
| Varies | 33.3% | 100% | 50% | 100% | 60% |

Table 18

In Table 18, sixty percent of the companies that responded vary their class size, depending on the needs of the employees and the type of curricula. The remaining forty percent conduct the remedial skills courses in groups of 2-5 students, 11-20 students, and individualized training.

Survey question twelve: how are your remedial training courses taught?

| | Company Size | | | | |
|---|---|---|---|---|---|
| Course Length | 100-499 | 500-999 | 1000-2499 | 2500-10,000 | Total |
| 1-5 hours | 0% | 50% | 11% | 50% | 19% |
| 6-10 hours | 0% | 0% | 22% | 0% | 13% |
| 11-20 hours | 0% | 0% | 11% | 0% | 6% |
| 21-30 hours | 0% | 0% | 11% | 0% | 6% |
| 31 or more hours | 33.3% | 50% | 22% | 0% | 25% |
| Varies | 66.7% | 0% | 22% | 50% | 31% |

Table 19

According to the data in Table 19, it appears that the length of time for training courses varies considerably. Nevertheless, about one-third of the respondents stated that course length depends on their employees' needs.

Survey question twelve: how are your remedial training courses taught?

| | Company Size | | | | |
|---|---|---|---|---|---|
| Type of Trainer | 100-499 | 500-999 | 1000-2499 | 2500-10,000 | Total |
| In-house expert | 0% | 50% | 16.5% | 50% | 23% |
| HR trainer | 0% | 0% | 0% | 0% | 0% |
| Outside consultant | 66.7% | 0% | 67% | 50% | 54% |
| Other | 0% | 50% | 0% | 0% | 8% |
| Varies | 33.3% | 0% | 16.5% | 0% | 15% |

Table 20

Based on the results in Table 20, more than one-half of the companies polled (fifty-four percent) use outside consultants to help train their employees in basic remedial skills. Almost a quarter more (twenty-three percent) use an in-house expert. Responses found in the "other" category consist of junior college faculty members.

Survey question twelve: how are your remedial training courses taught?

| | Company Size | | | | |
|---|---|---|---|---|---|
| Training Location | 100-499 | 500-999 | 1000-2499 | 2500-10,000 | Total |
| In-house classroom | 66.7% | 100% | 83% | 50% | 77% |
| Off-site facility | 0% | 0% | 0% | 0% | 0% |
| Other | 0% | 0% | 0% | 0% | 0% |
| Varies | 33.3% | 0% | 17% | 50% | 23% |

Table 21

Seventy-seven percent of the basic remedial classes that are taught are conducted in an in-house classroom or on company property. The remaining twenty-three percent of the respondents stated that the location varies, depending on the employees' needs.

Survey question twelve: how are your remedial training courses taught?

| | Company Size | | | | |
|---|---|---|---|---|---|
| Training Program | 100-499 | 500-999 | 1000-2499 | 2500-10,000 | Total |
| Video programs | 0% | 50% | 0% | 0% | 8.3% |
| Specific courses | 50% | 50% | 67% | 0% | 50% |
| Independent study | 0% | 0% | 0% | 50% | 8.3% |
| Computer-assisted instruction | 50% | 0% | 0% | 0% | 8.3% |
| Other | 0% | 0% | 0% | 0% | 0% |
| Varies | 0% | 0% | 33% | 50% | 25% |

Table 22

Half of the remedial training that occurs is taught by conducting specific courses. However, one quarter of the companies feel that the option for training programs should vary, depending on the employees' needs.

Survey question thirteen: how would you assess your company's production worker training programs? The adjectives used range from poor to excellent. There were many adequates and averages. Quite a few people pointed out that their companies have future plans to start up more comprehensive training programs. Others stated that they were just getting started. Some emphasized that they have effective on-the-job training and new processes training. And a couple of the respondents mentioned that they have tuition reimbursement

programs. Lastly, many stated that training is provided when it is needed.

## CHAPTER VI

## COMMENTS AND CONSIDERATIONS

Geber stated in a Training article that there are three main reasons why companies might establish an employee training program. The first reason is when management perceives a specific need that training can address. Second, the CEO, or a high level manager, may decide that training employees is the "thing to do." Third, a policy or legal mandate may require training (Geber, p. 29).

As mentioned previously, in order for the training program to be successful, it must be backed by management one hundred percent. If the CEO and his/her staff do not see the need, then the training program will not be a priority, and it will not work. After gaining management's complete approval, an effective training program needs to be created. Human Resources might do the planning, organizing, and training. On the other hand, the company might have an outside consultant set up the program.

Corporations should take a hard look at the skill levels of their employees. Whether or not they believe in training programs, they will probably be forced to start remedial skills training, in order to improve production. The survey results indicate, that, regardless of employee head count,

most companies feel that their production workers require little or no education and work experience. But as Workforce 2000 suggests, more and more jobs will require post high school education. Also, the analysis of the survey indicates that most companies offer on-going job-related training on an "as needed" basis. Corporate America is aware that employees must be kept up-to-date on the latest technological and procedural changes. The survey results also suggest that the majority of companies polled do not yet offer remedial skills training courses. Such courses would help reinforce the on-going job-related training.

However, the business community should not be forced to do all of the educational system's "product recall." All sectors of America need to get involved in shaping the educational process. The school system needs drastic reforms, especially in the inner cities. The government should take a more supportive role in these reforms. The government should also help out the business community by offering tax incentives and grants to set up remedial skills training programs. Parents and the community should begin taking a more active role in the functioning of the school system. Our children's futures are at stake. And lastly, the business community should realize that a surplus of qualified cheap labor is a thing of the past. All of us will have to work together to solve illiteracy problems and keep the United States economically competitive.

## BIBLIOGRAPHY


Berney, K. (1988, October). "Can Your Workers Read?" Nation's Business, 76 26-34.

Cyert, R. M., & Mowery, D. C. (1989, May). "Technology, Employment and U.S. Competitiveness." Scientific American, 260 54-62.

Dentzer, S. (1989, November). "The Maypo Culture." Business Month, 134 26-34.

Ehrlich, E. (1988, September 19). "America's Schools Still Aren't Making the Grade." Business Week, 306 129-136.

Geber, B. (1988, September). "Building a Training Department From Scratch." Training, 25 28-39.

Gorman, C. (1988, December 19). "The Literacy Gap." Time, 132 56-57.

Jacobs, J. (1989, August/September). "Training the Workforce of the Future." Technology Review, 92 66-72.

Johnston, W. B., & Packer, A. E. (1987). Workforce 2000, Work and Workers for the 21st Century Indianapolis, IN: Hudson Institute.

Kearns, D. T. (1988, November 1). "Help to Restructure Public Education from the Bottom Up." Harvard Business Review, 66 70-75.

McGee, L. F. (1989, August). "Teaching Basic Skills to Workers." Personnel Administrator, 34 42-47.

Patterson, W. (1988, September 5). "Gray Can Be Beautiful." Industry Week, 237 48-49.

Perry, N. J. (1988, November 7). "Saving the Schools, How Business Can Help." Fortune, 118 42-56.

Rachlin, J. (1989, February 6). "Chicago Parents 1, Bureaucrats 0." U.S. News & World Report, 106 51-52.

Rohan, T. M. (1988, June 6). "Blue-Collar Skills, A Vanishing Resource." Industry Week, 236 41-46.

Ropp, K. (1989, August). "A Reform Movement for Education." Personnel Administrator, 34 39-41.

Siler, C. & Weiner, S. (1989, June 26). "Trained to Order." Forbes, 143 73-78.

Smith, G. (1989, August 15). "Coping With the Coming Labor Shortage." Vital Speeches of the Day, 55 669-671.

Whitman, D. (1989, June 26). "The Forgotten Half." U.S. News & World Report, 106 45-53.

The Bottom Line: Basic Skills in the Workplace. (1988). Washington DC: A joint publication of the U.S. Department of Labor and the U.S. Department of Education.

# APPENDIX A

Dear Survey Participant:

I am currently working on my Masters Thesis in Adult and Corporate Instructional Management at Loyola University. My thesis topic is "Training the Future Workforce." I am surveying 100 diversified manufacturing companies in the Chicago area, with employment ranging from 300 to 22,600 employees. Attached is a survey that focuses on production workers' skills and the training that is offered to them. Please feel free to add any comments to any of the questions on the survey.

If you are interested in the results of this study, please indicate at the end of the survey. Enclosed is a stamped, self-addressed envelope for your convenience. Your input will make this study a success.

Thank you for your time and effort.

Ruth Schweikert

Ruth Schweikert

Number of Employees_____
Product Manufactured_____

Circle the answer(s) that best applies.

1. What is the minimum level of education required to be hired as a production worker at your company?
   A. No high school degree 64%
   B. GED 20%
   C. A high school degree 16%
   D. Some college required 0%
   If so, how much?_____

2. How much work experience is required to be hired as a production worker at your company?
   A. No experience 57%
   B. 1-2 years 31%
   C. 3-4 years 2%
   D. 5 or more years 2%
   Other 8%

3. Are production workers' skills tested before they are hired?
   A. Yes 47%
   B. No 53%

4. If yes, what skills are tested prior to employment?
   A. English language
   B. Reading
   C. Writing
   D. Basic math
   E. Problem solving
   F. Computer skills
   G. Logical reasoning
   H. Creative thinking
   I. Job-related skills
   J. Other_____
   _____
   _____

5. Once hired, are new production workers required to pass a job-related training course?
   A. Yes 38%
   B. No 62%

6. If yes, how long is this course?

   A. 1-3 days 10.5%
   B. 4-6 days 10.5%
   C. 1 week 5%
   D. 2 weeks 16%
   E. 3 or more weeks 37%
   Other 21%

7. Does your company provide on-going job-related training?
   Yes 94%
   No 6%

8. If yes, how often?
   A. Monthly 2%
   B. Semi-annually 2%
   C. Annually 6.5%
   D. As needed 83%
   E. Other_____ 6.5%

9. If applicable, how are your on-going job-related training courses taught? Circle all answers that apply.

| Class Size | | Length of Training | |
|---|---|---|---|
| A. Individual Training | 36% | A. 1-5 hours | 29% |
| B. 2-5 students | 7% | B. 6-10 hours | 16% |
| C. 6-10 students | 5% | C. 11-20 hours | 8% |
| D. 11-20 students | 16% | D. 21-30 hours | 3% |
| E. 21 or more students | 5% | E. 31 or more hours | 5% |
| Varies | 31% | Varies | 39% |

| Type of Trainer | | Training Location | |
|---|---|---|---|
| A. Immediate supervisor | 35% | A. Prod. environment | 38% |
| B. In-house expert | 13% | B. In-house class | 11% |
| C. HR trainer | 6% | C. Off-site facility | 2% |
| D. Outside consultant | 2% | D. Other_____ | 0% |
| E. Other_____ | 6% | Varies | 49% |
| Varies | 38% | | |

| Training Program | |
|---|---|
| A. On-the-job training | 47% |
| B. Specific courses | 2% |
| C. Self-testing | 0% |
| D. Computer-assisted-instruction | 0% |
| E. Other_____ | 0% |
| Varies | 51% |

10. Does your company provide training courses in basic remedial skills?
    A. Yes 28%
    B. No 72%

11. If yes, what skills are taught in these courses? If possible, please indicate the grade equivalence.

| | Grade Equivalence |
|---|---|
| A. English Language | _____ |
| B. Reading | _____ |
| C. Writing | _____ |
| D. Basic math | _____ |
| E. Other_____ | _____ |
| _____ | _____ |

12. If applicable, how are your remedial training courses taught? Circle all answers that apply.

| Class Size | | Course Length | |
|---|---|---|---|
| A. Individual training | 7% | A. 1-5 hours | 19% |
| B. 2-5 students | 13% | B. 6-10 hours | 13% |
| C. 6-10 students | 0% | C. 11-20 hours | 6% |
| D. 11-20 students | 20% | D. 21-30 hours | 6% |
| E. 21 or more students | 0% | E. 31 or more hours | 25% |
| Varies | 60% | Varies | 31% |

| Type of Trainer | | Training Location | |
|---|---|---|---|
| A. In-house expert | 23% | A. In-house class | 77% |
| B. HR trainer | 0% | B. Off-site facility | 0% |
| C. Outside consultant | 54% | C. Other_____ | 0% |
| D. Other_____ | 8% | Varies | 23% |
| Varies | 15% | | |

| Training Program | |
|---|---|
| A. Video programs | 8.3% |
| B. Specific courses | 50% |
| C. Independent study | 8.3% |
| D. Computer-assisted-instruction | 8.3% |
| E. Other_____ | 0% |
| Varies | 25% |

13. How would you assess your company's production worker training programs?

14. If you are interested in this study, please indicate your name and the address where the results can be sent.

## APPROVAL SHEET

The thesis submitted by Marla Ruth Schweikert has been read and approved by the following committee:

Dr. Todd Hoover, Director
Associate Professor, CHRD, Loyola

Dr. Barney Berlin
Associate Professor, CHRD, Loyola

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the Committee with reference to content and form.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Masters of Arts.

12-11-90
Date

Todd Hoover
Director's Signature